

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
30 October 2003 (30.10.2003)

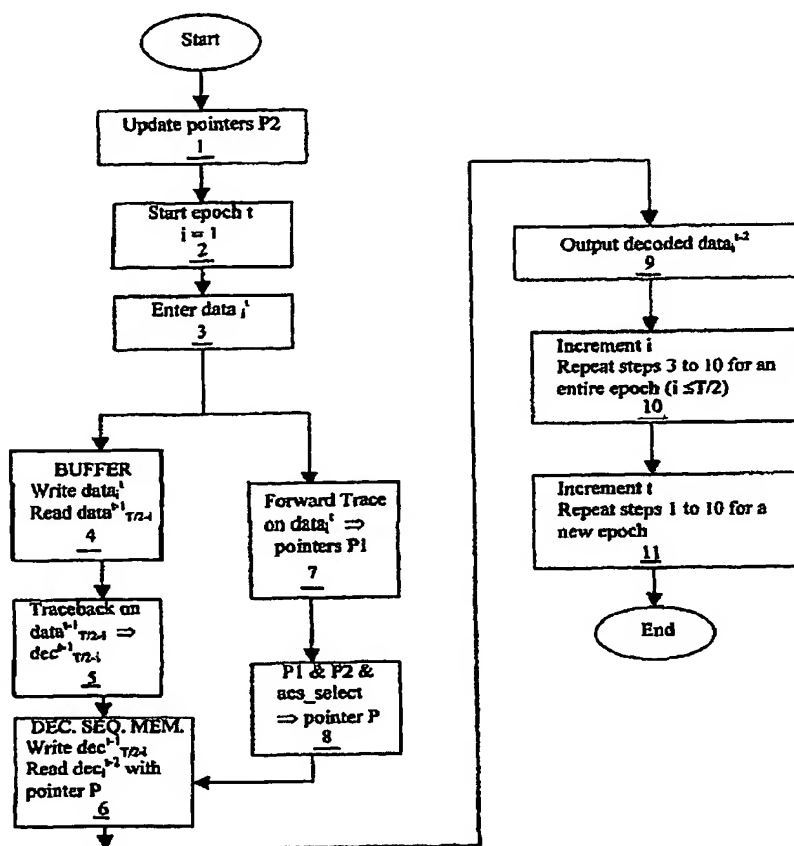
PCT

(10) International Publication Number
WO 03/090361 A1

- (51) International Patent Classification⁷: **H03M 13/03** (74) Agents: **TRIPOLI, Joseph, S. et al.**; c/o Thomson Multimedia Licensing Inc., 2 Independence Way, Suite 2, Princeton, NJ 08540 (US).
- (21) International Application Number: **PCT/US03/07166**
- (22) International Filing Date: **10 March 2003 (10.03.2003)** (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data: **60/373,246** **17 April 2002 (17.04.2002)** **US**
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- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: A MEMORY MANAGEMENT ALGORITHM FOR TRELLIS DECODERS



(57) Abstract: An improved all-path traceback/forward trace (APTFT) system for use in managing the memory used in processing decoded survivor sequences produced by a trellis decoder network. The memory size is decreased to $T \cdot N$, where T is a predetermined survivor memory depth and N is the number of states in the trellis. The latency value of the present system is equal to T . Both the memory requirement and latency value represent a 33% decrease in the value of similar parameters produced in a prior art APTFT system. An existing forward trace/path selection unit is modified to take advantage of the inherent nature of the forward trace process (7) in order to simplify the decoding system (9). A generalized version of the APTFT system permits greater flexibility in the choice of memory size and latency values needed to satisfy the requirements of a particular decoding system.

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Published:

— *with international search report*

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